

AMENDMENTS TO THE CLAIMS:

1. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

a) providing text input;

b) providing a library of function key words and punctuation definitions that identify the beginning or end of a phrase;

c) examining a first plurality of words of said text input;

d) determining, using said function key words and punctuation definitions, whether said first plurality of words includes a phrase;

e) repeating steps c-d until all the text input has been analyzed; and

f) formatting said text input by controlling the space size of every between word space according to said determined phrases ~~whereby the text input is formatted to enhance readability.~~

2. (original) The method of claim 1 wherein the text input is provided from a speech recognition device.

3. (original) The method of claim 1 wherein the text input is provided from a client computer.

4. (original) The method of claim 1 wherein the text input is provided from a computer keyboard.

5. (original) The method of claim 1 wherein the text input is provided from a touch pad.

6. (original) The method of claim 1 wherein the text input is provided from an on-screen touch pad.

7. (currently amended) The method of claim 1 wherein said library further includes templates and rules and said determining step is performed by an expert system ~~the text input is provided from a handwriting recognition device.~~

8. (currently amended) The method of claim 1 wherein the space sizes are adjusted differently according to the determined phrases ~~the text input is provided through a prosthetic device.~~

9. (currently) The method of claim 1 wherein the text input has certain aesthetic characteristics selected from at least one of justification, margins and lines per page, said text input being formatted according to the determined
5 phrases while maintaining said certain aesthetic characteristics ~~is provided from a network input.~~

10. (currently amended) The method of claim 1 wherein said determining step is performed by a neural network ~~the text input is provided from a text generating computer application.~~

11. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

- a) providing text input having a plurality of lines;
- b) providing a library of ~~function~~ key words and
5 punctuation definitions that identify the beginning or end of a phrase;

c) examining a first plurality of words of said text input, ~~said first plurality of words comprising three words;~~

10 d) determining, using said ~~function~~ key words and punctuation definitions, whether said first plurality of words includes a phrase, ~~and determining whether the second word of said plurality is an end of phrase;~~

~~e) marking said phrase;~~

15 ~~ef)~~ e) repeating steps c-~~ed~~ until all the text input has been analyzed and phrases determined for a plurality of said lines; and

fg) formatting said text input by controlling the space size between words within each line according to said
20 determined the phrases determined over the plurality of lines, ~~whereby the text input is formatted to enhance readability.~~

12. (currently Amended) The method of claim ~~11~~ wherein the plurality of lines form a paragraph ~~said determining step is performed by a neural network and wherein said text input is formatted according to said determined phrases to~~
5 ~~maintain the aesthetic quality of the text input while enhancing readability.~~

13. (currently amended) The method of claim 1 wherein said text input has certain aesthetic characteristics selected from at least one of justification, margins and lines per page, said text input being formatted according to the
5 determined phrases while maintaining said certain aesthetic characteristics ~~said library further includes templates and rules and said determining step is performed by an expert system.~~

14. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

a) providing text input;

b) providing a library of ~~function~~ key words and punctuation definitions that identify the beginning or end of a phrase;

c) using said key words and punctuation definitions to determine characteristics that predict boundary punctuation;

d) examining a first plurality of words of said text input;

~~ed) determining with a neural network, using said function key words and said determined characteristics punctuation definitions, whether to predict phrase boundaries within said first plurality of words includes a phrase~~;

~~e) marking said phrase;~~

f) repeating steps ed-e until all the text input has been analyzed; and

g) formatting said text input ~~except for between words containing a punctuation mark~~ according to the predicted phrase boundaries said-determined-phrases, whereby the text input is formatted to enhance readability;

~~h) examining the word before and after a word that is determined to be at an end of a phrase;~~

~~i) determining whether the examined words are phrase indicators; and,~~

~~j) storing information resulting from steps g and h in said library, whereby said neural network is trained to recognize phrases in said text input.~~

15. (currently amended) The method of claim 14 ~~±~~, wherein said formatting step further comprises adjusting the size of spaces between words differently according to said determined phrases ~~to maintain the aesthetic quality of the~~
5 ~~text input.~~

16. (currently amended) The method of claim 14 ~~±~~ wherein said text input has certain aesthetic characteristics selected from at least one of justification, margins and lines per page, said text input being formatted according
5 to the determined phrases while maintaining said certain aesthetic characteristics ~~said formatting step further comprises adjusting darkness of print.~~

17. (original) The method of claim 1 wherein said formatting step further comprises selecting a font.

18. (original) The method of claim 1 wherein said formatting step further comprises selecting a font size.

19. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

a) providing text input;

b) providing a library of ~~function~~ key words and
5 punctuation definitions;

c) examining a first plurality of words of said text input, ~~wherein said first plurality of words comprises three words;~~

d) identifying each word of said plurality as one of
10 the key words in the library or a non-key word;

e) extracting a pattern from said plurality of the key and non-key words;

f) ~~determining with a Clauseau engine, using said pattern to determine function words and punctuation definitions,~~ whether said first plurality of words includes a phrase boundary;

~~g) marking said phrase;~~

~~g)h)~~ repeating steps c-~~e~~f until all the text input has been analyzed; and

20 h) ~~i)~~ formatting said text input according to said determined phrase boundaries, whereby the text input is formatted to enhance readability.

20. (currently amended) The method of claim 19 further comprising the steps of:

Assigning a value from a predetermined set of values to phrase boundaries ~~breaks found by said Clauseau engine;~~

5 and

Formatting said text input according to said assigned values.

21. (original) The method of claim 1 further comprising:
Providing formatted text output to a printer.

22. (original) The method of claim 1 further comprising:
Providing formatted text output to a computer display device.

23. (original) The method of claim 1 further comprising:
Providing formatted text output to a speech synthesizer.

24. (original) The method of claim 1 further comprising:

Providing formatted text output to be incorporated into a video broadcast as closed-caption subtitles.

25. (original) The method of claim 1 further comprising:
Providing formatted text output to be incorporated into a Web page.

26. (original) The method of claim 1 further comprising:
Providing formatted text output to be incorporated into a printed book.

27. (original) The method of claim 1 further comprising:
Providing formatted text output to be incorporated into a magazine.

28. (original) The method of claim 1 further comprising:
Providing formatted text output to be incorporated into direct marketing literature.

29. (currently amended) A system for formatting text for enhanced readability, comprising:

a parser for parsing text input and recognizing words and punctuation;

5 a library for storing ~~function~~ key words and punctuation definitions;

a readability engine for determining phrases in said text input using said ~~function~~ key words and punctuation definitions and assigning values to ~~the spaces~~ every
10 between word space ~~words~~ in said text input ~~plurality~~, said assigned value being the likelihood that the word is the beginning or end of a phrase; and

a formatter for formatting said text input by ~~varying the spacing between words~~ by controlling the space size of every between word space on each line according to said assigned values.

30. (currently amended) A system for formatting text for enhanced readability, comprising:

a library for storing key words and punctuation definitions;

a parser for parsing text input into sections containing within-sentence boundaries, said sections being represented as input patterns of key and non-key words and recognizing words and punctuation;

~~a library for storing function words and punctuation definitions;~~

a neural net readability engine trained on sections of training text less punctuation that cross sentence boundaries and represented as test patterns of key and non-key words to predict boundary punctuation at the end of sentences, said neural net processing the input patterns to assign a value to a predicted phrase boundary within sentences for determining phrases in said text input using said function words and punctuation definitions; and

a formatter for formatting said text input according to said-determined the assigned values of the phrases.

31. (currently amended) A The system of claim 30 ~~for formatting text for enhanced readability, comprising:~~

~~— a parser for parsing text input and recognizing words and punctuation;~~

~~— a library for storing function words and punctuation definitions;~~

wherein the neural network readability engine
comprises a Clauseau readability engine for determining
phrases in said text input using said function words and
10 punctuation definitions; and
— a formatter for formatting said text input according
to said determined phrases.

32. (currently amended) A computer-implemented method for
formatting text comprising the steps of:

a) providing text input having certain aesthetic
characteristics selected from at least one of
5 justification, margins and lines per page;

b) providing a library of text data;

c) examining a first plurality of words of said text
input;

d) determining, using said text data, whether said
10 first plurality of words includes a phrase;

e) repeating steps c-d until all the text input has
been analyzed; and

e) formatting said text input to shorten spaces
between words according to said determined phrases to
15 reduce the length of the text input while maintaining the
certain aesthetic characteristics within a determined
phrase to improve publishing economies of scale while
minimizing degradation to text readability.

33. (currently amended) A computer-implemented method for
formatting text comprising the steps of:

a) providing text input having certain aesthetic
characteristics selected from at least one of
5 justification, margins and lines per page;

~~b) providing input about a user's reading level;~~

b)e)providing a library of key words and punctuation definitions that identify the beginning or end of a phrase
~~text data;~~

10 c) ~~d)~~examining a first plurality of words of said text input;

 d) e)determining, using said text data, whether said first plurality of words includes a phrase;

 e)f) repeating steps c-d~~e~~ until all the text input has
15 been analyzed; and

 f)g) formatting said text input ~~by varying the space size between words~~ according to said determined phrases to improve readability while maintaining said certain aesthetic characteristics and ~~said user's reading level to~~
20 ~~improve readability, the variation in space size being greater for poor readers than for good readers.~~

34. (currently amended) The method of claim 33 ~~1~~, wherein the text is formatted by varying the space size between words by different amounts according to said determined phrases.

35. (currently amended) The method of claim 33 ~~1~~, wherein said certain aesthetic characteristics includes lines per paragraph~~the text input includes paragraphs having a given number of lines of text, said formatted text having the~~
5 ~~same or fewer lines of text in each formatted paragraph.~~

36. (previously presented) The method of claim 1, wherein the text input is formatted to reduce the variation in print density from one line to the next.

37. (currently amended) ~~The~~ A computer-implemented method of claim 1 for formatting text, wherein a similar spacing pattern between words from line-to-line creates rivers, further comprising the steps of:

- 5 a) providing text input;
- b) providing a library of function words and punctuation definitions;
- c) examining a first plurality of words of said text input;
- 10 d) determining, using said function words and punctuation definitions, whether said first plurality of words includes a phrase;
- e) repeating steps c-d until all the text input has been analyzed;
- 15 f) formatting said text input according to said determined phrases whereby the text input is formatted to enhance readability;
- g) detecting rivers in the formatted text input; and
- h) manipulating the formatted text until the white
- 20 space is varied sufficiently from line-to-line to eliminate the rivers.

38. (previously presented) The method of claim 37, wherein the rivers are detected by either identifying vertical spaces that continue for more than two lines or analyzing the formatted text for spaces of a predetermined size

5 aligned with spaces of the same predetermined size or larger.

39. (previously presented) The method of claim 37, wherein the text is manipulated by first attempting to realign the second line in the detected river, and, if not

possible or not successful in eliminating the river,
5 attempting to realign the first line and then the third
line of the detected river.

40. (currently amended) The method of claim 1 wherein said
text input is formatted by varying the ~~spacing between~~
~~words and~~ physical features of letters within the text
input ~~according to the phrases determined over multiple~~
5 ~~lines of text to enhance readability while maintaining the~~
~~aesthetic quality of the text input.~~

41. (currently amended) The method of claim 30 ~~12~~, wherein
the library of function words and punctuation definitions
is provided by the neural network.

42. (currently amended) A computer-implemented method for
formatting text, comprising the steps of:

a) providing text input;

b) providing a library of ~~function~~ key words and
5 punctuation definitions;

c) examining a first plurality of words of the said
text input;

d) assigning, using said ~~function~~ key words and
punctuation definitions, values to the spaces between words
10 in said plurality, said assigned value being the likelihood
that the word is the beginning or end of a phrase;

e) repeating step d until all the text input has been
analyzed and values assigned to all of the spaces between
the words; and

15 f) formatting said text input according to the
assigned values to enhance readability.

43. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

a) providing text input;

b) installing an input vocabulary of ~~function~~ key

5 words and punctuation definitions that are stored in a library;

c) examining a first plurality of words of said text input using the punctuation definitions indicating a phrase;

10 d) examining said plurality or words to look for stored ~~function~~ key words indicating a phrase;

e) based on the examinations, assigning values to the spaces between the words in said plurality, said assigned value being the likelihood that the word is the beginning

15 or end of a phrase;

f) repeating steps c-e until all the text input has been analyzed and values assigned to all spaces between the words in the text input;

20 g) formatting said text input by varying the spacing between words according to the assigned values to enhance readability of the text input.

44. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

a) providing text input;

b) providing a library of ~~function~~ key words and
5 punctuation definitions;

c) training a neural network using the library to recognize phrases in text and assign values to spaces between words in the phrases, said assigned value being the likelihood that the word is the beginning or end of a
10 phrase;

d) examining a first plurality of words of said text input;

e) using the neural network to assign values to the spaces between words in said plurality;

15 f) repeating steps c-e until all the text input has been analyzed and values assigned to all of the spaces between the words; and

g) formatting said text input according to the assigned values to enhance readability.

45. (currently amended) A computer-implemented method for formatting text, comprising the steps of:

a) providing text input;

5 b) examining a first plurality of words of said text input;

c) assigning values to the spaces between words in said plurality, said assigned value being the likelihood that the word is the beginning or end of a phrase;

10 d) repeating steps b-c until all the text input has been analyzed and values assigned to all of the spaces between the words; and

e) formatting said text input by varying the spacing between words according to the assigned values ~~to enhance readability.~~